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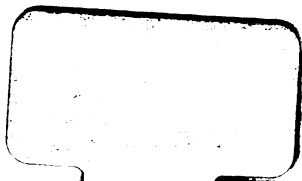
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A

TREATISE

ON

THE CULTIVATION

OF

ORNAMENTAL FLOWERS;

COMPRISING

REMARKS ON THE REQUISITE SOIL, SOWING,
TRANSPLANTING, AND GENERAL
MANAGEMENT:

WITH

DIRECTIONS FOR THE GENERAL TREATMENT

OF

BULBOUS FLOWER ROOTS,

GREEN HOUSE PLANTS, &c.

—◆—
BY ROLAND GREEN.
—◆—

BOSTON,

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DISTRICT OF MASSACHUSETTS, to wit:

District Clerk's Office.

BE IT REMEMBERED, that on the eighth day of April, A. D. 1828, in the fiftysecond year of the Independence of the UNITED STATES OF AMERICA, *John B. Russell*, of the said district, has deposited in this office the title of a book, the right whereof he claims as proprietor, in the words following, *to wit*:

"A Treatise on the Cultivation of Ornamental Flowers; comprising Remarks on the requisite soil, sowing, transplanting, and general management with Directions for the general treatment of Bulbous Flower Roots, Green House Plants, &c. By **ROLAND GREEN.**"

In conformity to the act of the Congress of the United States, entitled, "An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned;" and also to an act, entitled, "An act supplementary to an act, entitled, an act for the encouragement of learning, by securing the copies of maps, charts, and books to the authors and proprietors of such copies during the times therein mentioned; and extending the benefits thereof to the arts of designing, engraving and etching historical and other prints."

JNO. W. DAVIS, } *Clerk of the District of
Massachusetts.*

FLOWERS.



SHOULD the agriculturist have no taste for ornamental gardening, yet such is the laudable taste of the fair daughters of America, at the present day, that, there are but comparatively few, that do not take an interest in a flower garden. And this alone is a sufficient reason for the publication of these remarks.

Horticulture, as it respects Ornamental Gardening, is one of the most innocent, the most healthy, and to some, the most pleasing employment in life. The rural scenes, which it affords, are instructive lessons, tending to moral and social virtue; teaching us to "look through nature up to nature's God."

Flower gardens were ever held in high estimation by persons of taste. Emperors and kings have been delighted with the expansion of flowers. "*Consider the lilies of the field,*" said an exalted personage, "*how they grow;*" for Solomon, when clothed in the purple of

royalty, "*was not arrayed like one of these.*" Nature, in her gay attire, unfolds to view a vast variety, which is pleasing to the human mind ; and consequently has a tendency to tranquilize the agitated passions, and exhilarate the man—nerve the imagination, and render all around him delightful.

The cultivation of flowers, is an employment adapted to every grade, the high and the low, the rich and the poor ; but especially to those, who have retired from the busy scenes of active life. Man was never made to rust out in idleness. A degree of exercise is as necessary for the preservation of health, both of body and mind, as food. And what exercise is more fit for him, who is in the decline of life, than that of superintending a well ordered garden ? What more enlivens the *sinking mind* ? What more invigorates the *feeble frame* ? What is more conducive to a *long life* ?

Floriculture is peculiarly calculated for the amusement of youth. It may teach them many important lessons. Let a piece of ground be appropriated to their use—to improve in such a manner, as their inclinations shall dictate—to cultivate such plants as are pleasing to their taste ; and let them receive the proceeds. Let order and neatness pervade their little plantations. Let them be instructed, that nothing valuable

is to be obtained or preserved without labor, care, and attention—that as every valuable plant must be defended, and every noxious weed removed; so every moral virtue must be protected, and every corrupt passion and propensity subdued.

The cultivation of flowers, is an appropriate amusement for young ladies. It teaches neatness, cultivates a correct taste, and furnishes the mind with many pleasing ideas. The delicate form and features, the mildness and sympathy of disposition, render them fit subjects to raise those transcendant beauties of nature, which declare the “perfections of the Creator’s power.” The splendid lustre and variegated hues (which bid defiance to the pencil,) of the rose, the lily, the tulip, and a thousand others, harmonize with the fair fostering hand that tends them—with the heart susceptible to the noblest impressions—and with spotless innocence.

Situation. As to the proper situation for a garden, it is not always in our power to choose. A level plat, however, is to be preferred; for if there be considerable descent, the heavy rains will wash away the soil. A southern aspect, sheltered from the north and north-

west winds, is a proper situation for most plants. An inclination towards the north, or west, or any point between them, should, if possible, be avoided.

Soil. The natural soil should be a deep loam, which is easily made rich by old rotten manure. But here again, it is not always in our power to choose such a soil. In such cases we must endeavor to imitate, we must dig and carry off—and bring on loam, &c. and make a rich soil. The ground ought to be well pulverized with the plough or the spade. In a word, what is wanted, is a deep rich soil, natural or artificial, not too wet, nor too dry.

The ground in a garden must be kept rich, and often stirred. It ought to be manured every year. A compost made of decayed vegetables, yard manure, rotten leaves, ashes, and mould from any place, where it can be had, is proper for a garden. A garden should be well defended, by a high and tight fence, especially on the north and west.

Sowing and Planting. In the first place, the ground must be made fine, as well as rich. It should be moderately moist, not too wet, nor too dry. The beds should be raised three or four inches, above the level

of the walks; and the seeds ought, by all means, to be sown in rows, ten or twelve inches apart; and the earth should be moderately pressed upon them. The time for, sowing either annual, biennial, or perennial flower seeds, is in the months of April and May, according to the state of the season. Very small seeds may be covered with fine earth nearly half an inch, larger ones in proportion to their size; and those as large as a pea, to the depth of an inch, or a little more. Seeds of delicate plants, should be planted in flower pots, and the earth kept moderately moist, by watering with a watering pot, that is finely pierced, and does not pour heavily; or the pot may be placed in the pan, and water supplied at the bottom. The pots should be exposed to the sun, except from eleven A. M. to two P. M. when a powerful sun might scorch the vegetating seed. The mould for pots should be rich, and sifted through a coarse sieve, made for that purpose.

Transplanting.—The best time, perhaps, for transplanting annual plants is in June, and for biennial and perennial plants in September or the beginning of October—remembering in all cases to take a sufficient quantity of earth, with the roots, where it can be done with propriety. Scoop trowels will be found

useful instruments in this operation, which ought not to be done when the ground is very wet, but when it is only moderately moist, and in a cloudy day, or a little before the evening, or previous to a shower. If the ground be dry, shading the plants, and a little water may be necessary, for a short time. In case the roots should be small, or injured, or destitute of earth, when taken up, they must be shaded during the day, until they have gained strength. In placing a plant where it is to stand, great care is necessary to place the roots in their natural position, to bring the earth in contact with them, and to press the earth moderately about them.

If the plant is to be planted in a pot, place a piece of earthen ware over the aperture in the bottom, that the superabundant water may drain off, which would otherwise saturate and rot the roots. The pots should be nearly filled with rich earth and the plant carefully placed in the centre and the mould brought into contact with the roots, and moderately pressed.

Cultivation.—The plants must be properly thinned while they are small; for if left too near each other, they interfere, grow slender and weakly. As the plants increase in size, remove the weakest, and so continue to do, until they stand at a proper distance.

All plants of every description should stand at such distance one from the other, as that the air may circulate freely about them, and that the sun may have its proper influence in bringing them to perfection. The air and sun are absolutely necessary in perfecting the growth of plants, which never ought to stand so near, as to interfere with each other.

The earth ought to be kept loose about the plants, and for this purpose a prong-hoe is a useful instrument. Moving the earth should be done in dry weather; as ploughing, digging, or hoeing in wet weather, leaves the ground in a bad, clammy state. In a dry season stir the earth about plants and spread old coarse hay or straw about them. Old hay spread about the plants keeps the earth cool and retains the moisture, and is very useful to vines.

Weeds of every species must be removed, and the sooner the better after their appearance. No weed should be suffered to flower in a garden, nor in its border. The beauty of a garden depends very much on order and neatness—a place for everything, and everything in its place—keeping out the weeds and removing everything when decayed. No garden can show to advantage, where weeds are permitted to usurp the place of useful plants.

Shrubbery in general requires some attention. Prune out all inferior, dead, and decaying branches. Keep down the suckers and clean out the weeds, and stir the earth about the roots occasionally. Order and neatness add a lustre to everything.

Cuttings are pieces, cut from trees, shrubs, or plants of the last growth, and should generally, retain a small piece of the growth immediately preceding the last or ripened wood. They should be taken when the sap is active, and about six joints or buds are sufficient. Cut them with a sharp knife, transversely and smoothly, near a joint or bud of the previous growth, or between the two last growths. Set them in rich moist ground, in a shady place, leaving two or three joints or buds above the surface. If the weather be dry, water them and place old hay about them, to keep the earth moist. Such parts of herbaceous plants should be taken for cuttings, as do not show a tendency to flower. If the cutting be planted in a flower pot, place the pot in the earth, in a shady place, and cover the cutting with an inverted glass, for a short time, to preserve a moist atmosphere about it. If they send out roots, they will also send out branches, otherwise they die.

Layers are branches left on the parent plant or shrub, and bent down and fastened several inches (according

to the case) below the surface of the earth, leaving the extreme part out of the ground. A flat stone placed on the earth immediately above the layer is useful to keep the earth cool and to retain the moisture. When they have taken sufficient root, sever them from the parent stock, and at any proper time they may be transplanted.

As to the cultivation of herbaceous plants and shrubs in pots, a few directions may be necessary.—The earth should be kept moderately moist. The mould on the top should be dry before additional water be given. The pots should be frequently turned round, or the plants will grow crooked by reason of their inclining towards the sun or light. If the plants are to stand in pots, year after year, the balls of earth should be taken out in October, and the sides and bottom shaved off with a sharp knife, to the depth of an inch, more or less, according to the size, and then replaced, and the pot filled with some fresh compost or very rich earth made very fine. Two thirds of good rich earth and one third of old rotten yard manure, well incorporated, make a good compost for most plants, except the bulbous rooted, which require some sand.

Protection during the winter.—Herbaceous plants in general require some slight covering during the severity of a northern winter. Pine boughs, straw, old coarse hay, or leaves, are useful for this purpose, and may be removed about the first of April or before, if the weather will permit.

BULBOUS FLOWER ROOTS.

No class of plants is more interesting, perhaps, than this; yet merely an outline of the mode of cultivation must suffice.

Situation. A southern exposure, not too wet nor too dry, sheltered from the north and northwest winds, is proper for most bulbous roots.

Soil. Bulbous flower roots do best in a soil composed of one third sand, one third old rotten yard manure, and one third good rich earth, well pulverized and mixed together; and if a small proportion, say about one fourth, of decomposed vegetable mould, from

a wood or swamp be added, it will have a good effect, by giving additional lightness to the soil. The beds should be raised four or five inches above the level of the walks, that the superfluous moisture may run off. Some additional sand strewed in the trenches, made for the roots, before and after planting them, is recommended.

Transplanting. The proper season for transplanting most bulbous roots, is in August, September, and October. The only advantage to be gained, by taking up bulbs, after blooming (tulips excepted) is either to divide the roots, when too numerous, or to renew a worn out soil, neither of which can occur oftener than once in three or four years. Tulips and Hyacinths, when taken up after blooming, and after the foliage is decayed, may be kept from the ground till the middle of October.

Delicate and tender bulbs, as the *Feraria Tigrida*, &c. may be planted in pots, in November, or they may be kept in dry sand until April (which is best) and then planted in pots or open ground. In either case, they must be secured from the frost. As to Tulips and Hyacinths, in order to preserve their beauty in

perfection, the nicer varieties should be taken up, air dried, and replanted annually.

Depths and Distances. Large bulbs, as the Hyacinth and the large Lilies, should be planted to the depth of four inches ; Tulips, Narcissus, Jonquils, three inches ; Crocus, Feraria Tigrida, Gladiolus, &c. two inches, always measuring from the top of the bulb. The Polyanthus Narcissus may be planted five or six inches deep. The rows should be ten or twelve inches asunder, and the roots placed from three to eight inches apart, according to the size of the plants.

Protection during Winter. Bulbous roots should be covered in November with tanners' bark, leaves, rubbish of the garden, or some light substance, to the depth of three inches, to prevent the bad effects of severe frosts. Polyanthus Narcissus is more tender than Hyacinths, and ought to be covered six or seven inches. The covering must be removed early in the spring.

Management of Bulbous Roots in Pots. Hyacinths, Polyanthus Narcissus, Double Narcissus, and Jonquils, make a beautiful appearance during winter, in the parlor.

Bulbs intended for blooming in the winter, should be potted in October or November, and left out until it begins to freeze, and then placed in a warm room. They will want, occasionally, a little water, until they begin to grow; then they should have both air and sun, and plenty of water from the saucers or pans, underneath the pots.

Those bulbs, as Hyacinths, &c. which are designed to flower in glasses, should be placed in them, towards the end of November, the glasses being first filled with rain water, so that the bulbs may come in contact with it. Then place them in a dark place for a few days, to promote the shooting of the roots, after which expose them to the light and sun, and change the water as often as it becomes impure, not suffering it to freeze.

Bulbous rooted plants, growing in pots, should be frequently turned round, as they will incline to the sun or light—the earth on the top should be suffered to dry, before the next watering—when the plants have done growing, give them little or no water. If the plant be so managed the present year, as not to have a flower bud formed in miniature, there will be no flower in the next. If the leaves be well grown, and the plant properly exposed to the air and sun, then the sap will be duly prepared by them, and an embryo flower will

be formed in the bulb. All bulbs, in a certain period of the year, are dormant ; this state commences when the foliage begins to decay, after blooming—Then lessen the supplies of water, and in a little time cease to water altogether, until the season of regermination returns. The bulbs during this time, may be kept in the pots in a dry shady place, and in the same temperature as that in which they delight to grow.

Generally, it is best to take the bulbs out of the pots, after the decay of the foliage, and repot them in a fresh soil or compost, (mentioned above for bulbs,) a week or two before the period of regerminating ; at which time water will be necessary, and may be applied at the bottom, pouring into the pan, or it may be applied by a small watering-pot, that pours lightly, on the top, so as to keep the earth moderately moist. The earth should be kept loose on the top, and the water used for the plants ought to be rain water ; or such as has been exposed to the sun. Water that has been filtered through a rich compost is very useful.

The proper time to take up bulbous roots is in about a month after blooming, when the foliage has a yellowish, decayed appearance. Cut off the stem and foliage within an inch of the bulb, leaving the fibrous roots attached to it. After they are air dried, place them

singly in paper or dry sand, until replanted, or spread them on shelves in a dry apartment.

Flowers are divided into *annuals*, which flower and die the year they are sown; *biennials*, which flower the second year, and then die; and *perennials*, which do not, generally, flower the first year, but die down to the ground annually, and spring up again every succeeding spring for a number of years.

In the following alphabetical list, flowering trees and shrubs are included. We shall select such plants, shrubs, and trees, as are of easy cultivation, generally hardy—such as have singular foliage, fragrant odors, or beautiful flowers—such as make a handsome appearance. As to placing them in the garden, or elsewhere, to advantage, we leave to the convenience and taste of the proprietor.

ANNUAL AND BIENNIAL

FLOWERS.



ALTHÆA FRUTEX, (*Hibiscus syriacus*) is a beautiful shrub, but requires a warm sheltered situation, in the northern states. It is easily raised from the seeds, sown in the spring. The young plants must be well protected during the winter.

ALMOND, DOUBLE FLOWERING, (*Amygdalus pumila*) is a shrub, which is, generally, in the spring, loaded with beautiful flowers, resembling small roses. When in bloom it is not inferior to any shrub whatever, and makes a fine appearance in a border. It is propagated by suckers.

AMARANTHUS SUPERBUS.—Annual—superb—flowers late—tender—plant the seed in May, or before if the season be mild.

AMARANTHUS TRICOLOR.—This plant is annual, and is admired for its beautiful foliage, red, green, and yellow—tender. The seed is found in little tufts about the stalk, and should be sown in May, or before, if the weather be warm.

ANIMATED OATS, (*Avena sensitiva*) are annual, and resemble the common oats, while growing. The seeds are clothed with a stiff down, and have appendages like the legs of some insect, with apparent joints. They are affected by the changes of the weather, and of course, are continually moving. If they be wet, they will turn over several times, and twist about. If wet and held to a lighted lamp, they exhibit such motions of apparent agony, as an insect would, placed in a like situation.

ASTER, CHINA.—It is annual, and produces many flowers, beautiful to the sight. There are many species, as red, white, purple, striped, quilled, &c. The seed should be sown early in the spring. It flowers late in the season, and endures some frost, but will not stand a severe one.

AURICULA.—This is one of the flowers, the spe-

cies of which are distinguished by having awarded to them the name of famous *men*, famous *women*, famous *cities*, famous *battles*, &c. It may be raised from seed ; but the flowers so raised, do not resemble those of the parent plant, except by mere accident. However, if a flower be produced different from any which has appeared before, there will be a chance to add to the list of names. Auriculas are best propagated by dividing the roots, which send out several young plants annually. They are tender, and if planted in open ground, they must be well covered, and be kept from severe frost and rain during the winter. They are well calculated for pots, to flower in the parlor.

AZALEA NUDIFLORA.—Several species—commonly called American Honeysuckle. This shrub blows profusely—very fragrant, and makes a fine appearance in a border.

BOX, (*Buxus sempervirens*) is a small delicate shrub, which may be pruned to any shape, to please the fancy. It is an evergreen, hardy, and is proper to trim beds. It appears well in a border. It is propagated by cuttings, or by dividing the roots. If a plant be placed deep in the earth, and the soil be brought in close con-

tact with the small branches, (being spread as much as possible) they will send out roots, and afford a great number of small plants. The small branches are used by the ladies to trim cake, &c.

BRIER, SWEET, (*Rosa rubiginosa*) is a well known bush of the rose family—very hardy—foliage bright and fragrant—will grow in poor ground.

CANTERBURY BELL, (*Campanula medium*) is a biennial plant, and is admired for its profusion of large blue flowers.

CARNATION, (*Dianthus caryophyllus*.)—Here is beauty and fragrance. It is a superb plant, and is biennial and perennial. There are various kinds, distinguished by names, like those of the Auricula, and what was said of the seed of that plant applies to this. It is best propagated by *layers*. While it is in flower, it sends out several side shoots near the root. These are pinned down in August a little under the earth, leaving the extreme part erect. In a little time they take root, and the new plant must be severed from the old and transplanted. The old plant does not always stand another winter ; therefore, its branches are thus used to contin-

tinue the species. Carnations are rather tender as to frost ; and must be well covered, as far north as Massachusetts, to live through the winter. It is best to put them in large pots ; and to keep them in a green house, or parlor, or in some place where they can have air and light during the Winter. They merit all the care that can be bestowed upon them.

CASSIA MARYLANDICA is a perennial plant producing many small yellow flowers, suitable only to stand in a border. It is hardy and is propagated by seed.

CATALPA, (*Catalpa syringæfolia*) is a beautiful tree, much admired for its foliage and showy flowers. It is propagated by seed.

CHERRY, DOUBLE FLOWERING.---This is one of the most beautiful trees in the flower garden or shrubbery ; cultivation the same as that of the common cherry.

CHRYSANTHEMUM INDICUM.---This is a superb perennial flower, much esteemed ; being hardy and affording a brilliant display of beauty, late in the Autumn, when the chilling blasts of the north-west and frosts have only left us the vestiges of departed verdure.

They may stand in open ground until August or September, and then be taken up and placed in pots. When the frosts appear, keep them in a sitting room until after flowering, which is a long time, and then the roots may be put in the cellar, or in open ground. They will flower in the garden, if properly covered with glass. There are many varieties, all of which are propagated by dividing the roots.

CLEMATIS, AUSTRIAN, (*Clematis integrifolia*) is a perennial plant producing very neat flowers. Best propagated by dividing the roots.

CLETHRA (*Clethra alnifolia*) is a very common shrub, which produces fragrant flowers, in clusters, in the Autumn.

COLUMBINE, (*Aquilegia*)—Perennial—very common—very neat—many species.

CONVOLVULUS.—Many species—annual—Convolvulus major is commonly called *Morning Glory*. It is a vine and a great runner—many colors. Convolvulus minor, called *Beauty of the Night* because it blossoms at evening—many colors. They are much admired. The seed must be sown early in the Spring.

CORCHORUS JAPONICUS.—This shrub, although cultivated as a green house plant, will thrive in a warm sheltered place in a garden. It produces numerous flowers of a golden yellow, in wreaths, much admired.

CROCUS.—A bulbous rooted plant—hardy—very early—various colors; as blue, white, purple, yellow, &c. Appears to advantage in small pots. Propagated by the bulbs.

CUPID'S CAR, or MONK'S HOOD, (*aconitum napellas*) is a beautiful, hardy perennial. It produces many neat blue flowers both in Summer and Autumn. It is propagated by dividing the roots.

DAHLIA.—This is a beautiful autumnal flowering plant, a native of Mexico. There are many varieties, single and double, and of almost every color and shade. Dahlias will grow in almost any soil, but a poor sandy, or gravelly soil is thought best, for the purpose of preventing them from growing too luxuriant, which would be the case, if planted in a rich soil. In a poor soil they produce a greater abundance of flowers. They are propagated by seed and by dividing the roots.

The seed may be sown in March, in pots, and placed in a hot bed, or green house. About the middle of May, or when there is no danger from frost, plant them out in the borders, or wherever they are to stand, and as they advance in height, let them be well supported by stakes, otherwise the wind will break them down.

The roots are tuberous, resembling a sweet potato, and should be taken up in October or November, and preserved through the Winter in a box filled with dry sand, placed where the frost never penetrates. Towards the end of April, or when they begin to sprout, divide the roots and plant them where they are to stand, taking care to cover them in case of frost. Plant only those that have a bud, and be careful that it is not hurt by dividing the roots. The plants soon shoot up to considerable height, and produce a great abundance of flowers. The plants must be well supported by slender stakes. They are said to do well if planted in large pots.

DAISY, (*Bellis*) is a small, delicate, perennial plant, and produces beautiful little flowers. It is hardy and well calculated for pots, placed in the sitting room; in which case, they will flower in the Winter. It is propagated by offsets.

DWARF BASIL, (*Ocimum minimum*,) is a sweet,

fragrant, annual plant. Easily raised by seed. But few plants exceed this in fragrance.

EGG PLANT.—This is a singular, annual plant. The white (*Solanum melongena*) is the most unique, producing a fruit resembling a large white egg. The seed should be planted early, in a hot bed, and after the frosts have gone past, transplant them where it is desired they should stand.

EUPATORIUM, BLUE, (*Eupatorium caelestinum*) is a perennial plant producing many beautiful flowers, much admired. Propagated best by dividing the roots.

EUPHORBIA LATHYRIS is a biennial plant, commonly called the Caper tree. It is singular in its foliage, and bears a small fruit useful for pickling. It is rather tender, but will stand the Winter very well in a common hot bed. It is raised from seed.

FADING BEAUTY, or MORNING BRIDE, (*Scabiosa atropurpurea*) is an annual plant producing beautiful flowers; but they soon fade, continuing only an hour or two. The seed should be planted early in the Spring.

FIR, (*Pinus balsamea*) is not a flowering tree, but it is a beautiful evergreen, and very ornamental.

FOXGLOVE, (*Digitalis*) is a biennial and perennial plant, and produces very handsome flowers. There are several species, but the purple is the most beautiful. The seed is very small, and ought to be sown early in the spring, and very lightly covered with earth.—The plant possesses high medicinal virtues.

FRINGE TREE, (*Cheiranthus*) a beautiful American shrub covered with white flowers in its season. It is hardy, and will grow in any soil, but flourishes best in moist ground.

GERANIUM, (*Pelargonium*)—This plant wants hardiness only to make it one of the finest and most valuable productions in the floral kingdom. There are many varieties. Some give us flower with little or no leaf; others possess beauty of leaf, as well as of flowers; some give us no fragrance; but others give us the most delightful odors, and in great profusion. The geranium is a native of the South of Africa, and will not endure the frost. It is easily propagated by cuttings from any part of the plant, old wood or young, and placed in a pot. In a green house they will bloom throughout a northern winter. They are properly green house plants. There is one, however, which is as hardy as an oak tree, *Geranium maculatum*, producing a blue flower. It is possessed of great medicinal powers.

GARDEN ANGELICA, (*Angelica archangelica*) has a bold appearance when in flower. It is suitable for a border and very showy. It is propagated by seed. It is a perennial.

GLYCINE, CLUSTER FLOWERING, (*Glycine frutescens*) is a perennial vine, and will extend on the side of a house or wall to great length. It is much admired. The flowers are variegated. Propagated by seed and from layers.

GOLDEN COREOPSIS, (*Coreopsis elegans*).—This is an annual plant and produces a profusion of splendid flowers of a brilliant yellow, with rich purple centre. It is easily raised from the seed.

GOLDEN EVERLASTING, (*Xeranthemum lucidum*) is a very singular plant, and produces bright yellow flowers, which if plucked before the seed ripens, will hold their brightness for years. It is much admired. The seed should be planted early, as the plant will flower late in the season.

HOLLYHOCK, (*Althæa*)—This is a showy plant for a shrubbery.—It is hardy and perennial. There are various kinds; single and double; white, red, yellow, black, and variegated.

HONEYSUCKLE.—This plant is very beautiful in its place ; it climbs up houses, and over hedges ; it forms arbors and bowers ; it blooms in clusters. Three varieties we shall name. The *Italian* (*Lonicera italica*) produces an abundance of flowers early in the season, diffusing a rich fragrance all around. The flowers are changeable. The *Variiegated* (*Lonicera caprifolium*) blooms monthly and has a delightful fragrance. The *Scarlet Trumpet* (*Caprifolium sempervirens*) blooms monthly,—scarlet flowers, and makes a beautiful appearance. They may be propagated by seed or cuttings, but best by layers.

HYACINTH, (*Hyacinthus orientalis*.)—This is a bulbous rooted plant, and, like all other plants of this class, is perennial. It is a beautiful and fragrant flower ; it blooms early. It will bloom in glasses filled with water in a room, but better in pots of earth. It is best propagated by offsets. While the parent root is blowing, it sends out several young ones. They should be planted at the depth of four inches. There are many varieties of this favorite flower, both single and double ; the former have the most vivid colors, but the latter are generally preferred. Such was the rage in Holland for this superb flower, that in the year 1771, four thousand dollars were refused for a single bulb.

HYDRANGEA, (*Hydrangea hortensis*) is a small shrub and produces very large flowers, which are changeable. The flowers are at first green—change gradually to rose color—then to green, occupying the space of about six months. It is a house plant; will bear some frost; but must be kept during the Winter in a green house, sitting room, or cellar into which some light is admitted. This ornamental shrub is easily propagated by cuttings.

ICE PLANT, (*Mesembryanthemum chrystallinum*) is an annual plant, and has an icy appearance. It is singular. The seed should be planted in pots early in the Spring.

IMPATIENS BALSAMINA.—A very fine annual plant, with great abundance of showy flowers. There are several varieties, both single and double, rose colored, red, purple, pure white, variegated and crimson. The flowers are elegantly formed, and the colors of many are very vivid. The plant is commonly called *Balsamine*. It will bloom in July and continue in flower until the frost appears. The seed should be sown in May.

IRIS, or **FLUER DE LUCE**.—This is a perennial

plant, perfectly hardy. There are many varieties both large and small. From its great combination of colors, and unique appearance, it has ever had admirers. It shows to advantage in a border. It is propagated by dividing the roots.

LAGENTRÆNIA INDICA.—A flowering shrub, which endures the Winter of the Middle and Southern States—in Massachusetts it must be treated like the hydrangea, but its beauty will repay this attention.

LAUREL, BROAD LEAVED, (*Kalmia latifolia*) is an evergreen shrub, which produces flowers of great delicacy and beauty, being white, tinged with red. This ornamental shrub is occasionally found in rocky woodlands.

LABURNUM, (*Cytisus laburnum*).—Is a tall and handsome shrub, loaded, when in bloom, with yellow flowers. It is sometimes called *Golden Chain*. It is tender, and to stand a Massachusetts winter must be planted in a warm and sheltered situation. It is raised from the seed.

LARKSPUR, (*Delphinium*)—is an annual plant of no fragrance, but of great variety of colors. It makes

a good appearance, and is easily propagated from the seed.

LILAC, (*Syringa vulgaris*.)—This is a large shrub, very hardy, and much admired when in bloom. It has large bunches of flowers which possess considerable fragrance. The white and the purple may be easily grafted, or inoculated into each other, and when the shrub, with a handsome head, is thus managed, some branches producing purple and others white flowers, it makes a beautiful appearance. It is propagated from suckers, of which it sends out too many, and from which it should be kept as clear as possible. The Persian lilac (*Syringa persica*) is a neat shrub, loaded, when in bloom, with very delicate flowers. It is propagated by suckers.

LILY, (*Lilium*.)—Of this plant there is a great variety; but only a few shall be named.—The White (*Lilium candidum*) grows to the height of three or four feet, and produces very large, white, fragrant flowers. The Tyger (*Lilium tigrinum*) grows to the height from four to six feet, and produces many spotted flowers of a bold appearance. The *Martagon* is much like the latter, except the plant and flowers are more delicate. All these are bulbous rooted, and are best

propagated from offsets. The Asphodel (*Lilium luteum*) grows to the height of two feet, and produces beautiful yellow flowers. It is propagated by seed or offsets. All the above named lilies are well calculated to beautify a border. The Lily of the Valley (*Convallaria majalis*) is a small dwarf plant, that thrives best in the shade, where it produces little delicate flowers of exquisite fragrance.—propagated by offsets.

LIME PLANT. This plant, (*Podophyllum peltatum*) is a singular production of nature. The stem, foliage, flower, and fruit, are formed in the earth; and after the plant has come up, there is nothing more than the extension of parts. The stems, at the height of from eight to twelve inches, branch out in two arms, at the extremity of each is a large palmated leaf. In the fork proceeds the fruit stem. The first that is seen in the spring is a delicate membraneous cap, which is soon burst open by the flower bud, which is large, white, and round. The shoulders and arms, lying close to the stem or trunk, soon appear, and as the plant rises, the fruit stem elongates and the arms elevate themselves. The fruit is about the size of a large lime, green while growing, and yellow when ripe; has the flavor of a pine apple; and as to eating, but little inferior to that fruit. The plant requires a moist soil in a shady situation. May be propagated by seed, but best by dividing the roots, which are creeping and jointed. The root is medicinal.

LYCHNADIA, (*Phlox*) is a perennial, several varieties, as purple, white, striped, &c. The plant is hardy, and produces many delicate flowers, and is long in bloom. It is best propagated by dividing the roots.

MEZEREON, (*Daphne mezereum*) is a small beautiful shrub, blooming in the month of March, loaded with flowers of delightful fragrance. It is hardy as a shrub-oak, and is propagated from the seed. It produces a red fruit, which is poisonous.

MOUNTAIN ASH, (*Sorbus aucuparia*) is a very ornamental tree, admired for the beauty of its foliage and its clusters of scarlet fruit, which remain on it for months. It is propagated from the seed.

MUSK GERANIUM, (*Geranium moschatum*)—is an annual plant, and is admired only for its strong flavor of musk. The plant will stand the winter in a common hot-bed, and in this case may be considered biennial. The seed must be planted early.

MYRTLE, EVERGREEN, (*Vinca minor*)—is an evergreen vine, producing blue flowers. There are several species, and all neat and pretty in their place.

NARCISSUS.—A bulbous rooted plant, managed

precisely like the Hyacinth. It blooms early, is very beautiful, and is fragrant. This plant is hardy, and well calculated to bloom in a pot, in the green house, or in a parlor. It is propagated by bulbous offsets, which increase every year. Polyanthus Narcissus and Jonquils, both elegant flowering plants, are propagated and cultivated, in all respects, in the same manner.

NASTURTIUM.—An annual plant with showy flowers. The seeds are enveloped in fleshy pods, which, before they become ripe, are excellent for pickling. The seed should be sown very early in the spring. The plants should be supported from the ground by bushy sticks.

PASSION FLOWER, (*Passiflora*) is a perennial vine, which produces a very beautiful flower. The name originated from the large *cross* in the middle of the flower, surrounded by appendages, resembling a *glory*. The plant is also beautiful; and like the honeysuckle, has a succession of flowers for a long time. It is tender and suitable for the green house. It will not endure a northern Winter in open ground. It is best raised from cuttings.

PÆONY, (*Pæonia*)—is a perennial, that has a very grand flower, but of short duration. There are se-

veral species much admired. Propagated from off-sets.

PEA, SWEET, (*Lathyrus odoratus*)—There are many species as to color and fragrance. These are annual. The Everlasting pea, (*Lathyrus latifolius*) is perennial, and produces many clusters of showy flowers, and remains in bloom a long time. The seed should be planted early in the spring.

PEACH, DOUBLE FLOWERING.—This is a very showy tree, its flowers are as double and as large as the smaller sorts of roses—hardy, and treated like other peach trees.

PINK, (*Dianthus*)—is a perennial plant, too well known to be described here. There are many kinds, as to size and color, but all are fragrant. They are desirable articles for a flower garden, and are easily propagated by seed, by layers, and by dividing the roots.

PERENNIAL SUNFLOWER, DOUBLE, (*Helianthus multiflorus*)—is a fine plant to beautify a border—Propagated by seed, or by dividing the roots.

POLYANTHUS,—This perennial plant, (*Primula*

polyanthus,) is hardy—has many showy flowers, and is much esteemed. There are many varieties. The plant blooms best in a shady situation. It is best propagated by dividing the roots. Polyanthus Narcissus is a very pretty perennial, well calculated to bloom in a parlor. It is bulbous rooted, and easily propagated by offsets.

PYRETHRUM PARTHENIUM, commonly called Double Feverfew, is a hardy perennial, and produces an abundance of white flowers, and continues in bloom a long time. It is easily propagated by the seed.

POPPY, (*Papaver*,) is an annual plant, admired for its great variety in size and in flower. The double are very showy; but, like beauty, soon fade. It is a medicinal plant and easily cultivated.

PURPLE HYACINTH BEAN, (*Dolichos*,) is an annual runner, producing large clusters of purple flowers, much admired. The seed should be planted early, and the plants defended from the frost.

ROSES, (*Rosa*.)—This favorite flower is worthy of all the care and attention that can be paid to it. There are many varieties, as to size, singularity, foliage,

beauty, and fragrance. Some catalogues enumerate more than five hundred varieties. Messrs. G. Thorburn & Son have a splendid collection in their Green House, Liberty Street, New York. No class of plants yields more intrinsic delights, than this. It is unrivalled. To describe the beauties and excellence of the various species would fill a volume.

They may be propagated from seed, but as the seed seldom comes up till the second year, the usual mode of propagation is by suckers, which come out near the old stems, during the summer. The suckers, when planted out, should be cut down to four or five inches of the ground. The time for planting is either in the months of October and November or in April. As to the management ; the ground should be kept good and dug every autumn. They should, except when trained against a wall, be kept cut down to a certain height, according to their natural size ; for when they get long stems and limbs, they produce fewer flowers. All the weak, dead or dying wood should be pruned out close without leaving any ugly stubs. "The yellow rose requires an airy situation and a gravelly soil, and that every autumn one half of the old wood should be cut down within four inches of the ground ; by this means a succession of thrifty blooming shoots will be kept up.

The Chinese Monthly Roses are propagated by cuttings, taken in the spring and properly placed in moist

earth. These are generally tender and require to be taken into a green-house or parlor during the winter. There are some, however, that are very hardy, and bid defiance to the frost. The writer of this article has a Chinese pale red, monthly rose, which has stood out for several years, being only covered with a box, during the severity of the winter. It is now February 28, 1828, and the foliage is yet bright, although it has been frozen many times, during the present winter. The thermometer, however, has not been lower the present season, than one degree above zero.

ROSE ACACIA, (*Robinia hispida*,) is a singular shrub, producing many clusters of flowers, much admired. Propagated by shoots from the roots.

ROSE COLORED HIBISCUS, (*Hibiscus palustris*,) is a perennial plant producing very showy flowers—makes a good appearance in a border. Easily propagated from the seed.

RUDBECKIA—A perennial plant producing many flowers, which are very durable and much admired. Propagated best by dividing the roots.

SCARLET CACALIA, (*Cacalia coccinea*,) is a small annual plant, which produces numerous scarlet flowers, very showy. Easily raised from the seed.

SCARLET LYCHNIS, (*Lychnis chalcedonica*,) is a perennial plant. There are two varieties, the single and the double. The single is pretty, but the double is splendid. The former is propagated from seed, and the latter by dividing the roots.

SIBERIAN CRAB.—This is a small tree, esteemed for its large fragrant flowers, and for its small fruit. The *Pyrus prunifolia* produces a beautiful longish fruit. The *Pyrus baccata*, or Cherry crab, bears a beautiful round fruit. The *Pyrus spectabilis*, or Chinese double blossom, has the most beautiful flowers of the family. They are all delicate in form and flower.

SNOW-BALL TREE, (*Viburnum opulus*,) is a beautiful shrub, especially when in bloom. It is propagated by suckers.

SNOWBERRY, (*Symphoria racemosa*,) is a small shrub which produces clusters of white fruit in autumn, and is ornamental. Propagated best by suckers.

SPICE-WOOD, (*Laurus benzoin*,) is a very fragrant shrub of medicinal virtues. It grows best in the shade, and sometimes bears a long green spicy fruit. It is propagated by suckers.

SPIDERWORT, (*Tradescantia*)—Is a singular perennial plant, which is in bloom for a long time. The blue is more admired than the white. It requires a light covering during the severity of winter; and is propagated by dividing the roots.

SPIRÆA. This is a small shrub, loaded with delicate flowers in the season of its blooming. Propagated by suckers.

SYRINGA, or **MOCK ORANGE**. A shrub, which has flowers much like those of the orange. It makes a pretty appearance with other shrubbery. Propagated by suckers.

STRAWBERRY TREE, (*Euonymus*), is a very handsome shrub, producing, in autumn, an abundance of fruit, somewhat resembling the strawberry. The European is preferred to the American. It has been called the *Burning Bush*, from its appearance when loaded with ripe fruit. It is propagated by seed and by suckers.

SWEET BAY, (*Laurus nobilis*), is a very pretty evergreen shrub—well calculated to stand (in a large pot) in the parlor during winter. Propagated by suckers.

SWEET WILLIAM, or POETIC PINK, (*Dianthus barbatus*,) is an imperfect perennial, producing very handsome flowers of small size. It is propagated by seed, the plants of which, do not produce flowers like those of the parent plant, except by chance. It may be propagated by dividing the roots.

TULIP, (*Tulipa*.) In no family of plants has nature so varied her delicate tints as in this. There are more than six hundred varieties of this splendid flower cultivated in the Linnæan Garden on Long Island. During the Tulip fever, which raged in Holland, about the middle of the seventeenth century, some splendid varieties were sold for enormous sums of money ; one of which, called the *Viceroi*, brought ten thousand dollars.

The tulip may be raised from seed ; but it is, as in the case of the *Auricula*, mere chance, if one be obtained, that will produce flowers like those of the parent plant. They are best propagated by the bulbs.

There is something respecting this plant, astonishing. After flowering, the foliage and roots decay, and a bulb or bulbs are formed of the juices of the old plant. A bulb contains all the parts of the future plant, and soon becomes as much disengaged from the decayed parent plant, as the ripe acorn is disengaged from its parent tree. At this time, they may be carried, (like many

other bulbs,) any length of distance in dry moss or dry sand. They should be planted out, about three inches below the surface, in a rich soil, in August or September; after which they throw out roots and prepare for an early appearance in the ensuing spring. If the bulbs be kept through the winter and planted in the spring, they do not thrive that season. The nice varieties should be taken up after the decay of the old plants, every year, air dried, and kept until September or October, and then planted.

VENETIAN SUMACH, or FRINGE TREE, (*Rhus cotinus*,) is a very singular and beautiful tree, which is loaded "during summer with tufts of russet colored down, and forms the most singular ornament of the garden." It has been called the *smoke tree*. Propagated by layers and by suckers.

VIOLET, BLUE FRAGRANT.—This little plant (*Viola odorata*,) is perennial; the flowers blue, double and fragrant. It blooms early in the season and continues in flower for some time. "It is of considerable use in chemical inquiries, to detect an acid or an alkali; the former changing the blue color to a red, and the latter to a green." It is best propagated by dividing the roots, which spread very much.

GREEN HOUSE PLANTS.



LILIES OF THE VALLEY,—should by no means be potted till the flower buds appear ; for, if potted before, it is uncertain whether one quarter of them will flower. If you have them growing in a garden, they should be frequently examined in the spring, as the flower buds are easily perceived a considerable time before they flower. Take them up carefully with a knife, with as much earth as possible about them, and plant them thick in pots or boxes. They must be kept moderately moist, and they will blow in perfection.

When placed in a room, the window should never be opened against them, as the draft is pernicious to their welfare. When the window is opened for any considerable length of time, the plants should be removed to a distance from it ; and when the bloom is over, they should be planted out in the borders, or plunged in the ground in pots, &c. They seldom blow well if potted before the green is up ; if potted before, you can see

the flower buds. The best time for doing it is from January to March. They do well in any common garden mould, as each crown blows but once in three years.

RANUNCULUSSES,—should be planted in pots which are about nine inches deep, and seven inches over. The compost proper for them is a fresh and rather sandy loam, mixed with a little rotten dung, but very little. The mould thrown up in heaps by moles, in a fresh loamy soil, is preferable to any ; if, of a red color, the better. The Scarlet Turban should be planted in November. Fill the pots with the compost to the brim ; then take the root between the finger and thumb, and thrust it into the mould about half an inch below the surface, which is the proper depth at which they should then be plunged in the ground, (for they never do well in pots, if they are not plunged) in a warm sunny situation, to forward them ; but they must not be put under glasses, as they never flower well if forced, and sometimes, in that case, not at all. I find the best way to obtain them in perfection in pots is to plant them in a warm sunny situation in the natural ground, and defended from very severe frost by placing hoops and mats over them ; but they must not be covered except the frost is severe, as the covering weakens them if continued long. When it is necessary to cover them, these mats should be taken off while the sun shines on them, and covered again when it goes off. Just as the blossom begins to expand, is the best time to pot them. Take them up with as much earth about them as possible, and plant three or four roots in each pot, placing them in a room or frame,

under glasses ; but they must be watered every day, and kept quite wet, (as they thrive in moisture) and they will bloom in the greatest perfection, and continue in beauty a long time.

ANEMONES, may be planted in October, November, or March, as they are hardier than the Persian *Ranunculus*, and may be potted and managed in the same manner as the Scarlet Turban *Ranunculus*, only planted rather deeper. The Single Anemone, or Wind Flower, may be raised in great variety from seed, which should be sown in beds four feet wide, in March, and covered the same depth as the *Ranunculus* seed, or a little deeper, but not more than an eighth of an inch. A mat should be placed over it, through which it should be watered till the seed is fairly up, then exposed to the sun by degrees, and kept constantly moist by frequent waterings : by these means they will bloom the same season, and you may probably obtain some fine new double flowers, which should be marked, and separated from the others. The double sorts are increased by parting the roots ; for the old roots, when come to their full size, become hollow, and separate naturally.

SINGLE and DOUBLE JONQUILS, should be planted, whether in the open ground or in pots, any time from October to January. The pots for this purpose should be the same size as those used for hyacinths. Plant six or eight roots in a pot in the hyacinth compost or in any light rich garden mould mixed with a little dung. But, in order to have them in perfection in pots, it is best to take them up in bunches, provided they have been in the ground long enough to be grown so ;

if they were planted in the Autumn, take them up singly : the proper time for doing this is when they first show flower ; remove them into a warm room, give them plenty of water, and they will blow very fine.

When the bloom is over, they should be turned out of the pots, and planted in the garden, to remain there till the foliage becomes withered and dry, when they may be taken up and treated the same as hyacinths. But it is best to let them remain in the ground three years before taken up, as they will rise in large bunches for potting, and always bloom stronger.

WHITE LILIES, are beautiful sweet plants for rooms. If you have them growing in a garden, they may be taken up in large bunches, and planted in large pots, in which they will thrive remarkably well. The best time for taking them up is in January or February. Keep them in a warm room, in a sunny window ; constantly supply them with water, and they will blossom very fine. When the bloom is over, they should be turned out of the pots, and planted in the borders again, each root separately, and they will be in good order for forcing the second or third year after.

All the different sorts of Martagon or Turk's Cap Lilies will do to force equally as well as the White. Any good common garden mould is proper for potting them in. They are all propagated by dividing the offsets from the old roots, and planting them in borders.

ROSES. The sorts which answer best for forcing are the Common Provence, White Provence or Rose Unique, and the Moss. They all do remarkably well in pots.

To flower them well in rooms or hot houses, they should be potted in the Autumn as soon as the leaves are off. However, they should not be forced till the second year, but they will blow in pots in the ground, though not so fine.

They must be kept moist during the drought of summer, to make them grow as strong as possible. After they have had one summer's growth in pots, they will be in good order for forcing, and may be put into a room in the beginning of January, placed in a sunny window, and well watered. If they are forced in a hot house, there must be a quantity of young plants potted every year for a succession, as they will not force two years following. The Damask, and Maiden's Blush Roses will force, but not so well as the sorts before mentioned. The Rose Demaux and Pomponne may be planted in pots, and plunged in the ground, the same as the other sorts, and may be taken into the room when they show flower, as they do not force well. Small insects, commonly called the green fly, which appear on the tops of the young shoots and flower buds, are very destructive to the roses, and, if not destroyed, totally spoil the flower buds, and kill the tops of the young shoots. They may be destroyed by fumigating them with tobacco. If you are not provided with a fumigating bellows, I find it answers quite as well to put the tobacco in a small flower pot with a fiery coal, and blow it with a common bellows. If the plants are kept in rooms, it may be done in any back place, as the smell of the smoke is very disagreeable for some time after

in the room. Place the tobacco on the floor, and the plants all round it, and blow it continually till the tobacco is consumed. The smoke should be confined where the plants are for three or four hours, if possible, and it will entirely destroy those insects.

All plants kept in rooms should be served in this manner as soon as any insects appear. Before the plants are taken into the rooms again, about two inches of the mould of the top of the pots should be taken off, and some fresh rich soil put in the place of it; as, by the fumigation, many of the insects fall off on the mould almost lifeless, but will sometimes recover and get on the plants again if the earth on the top be not changed.

The plants should have a good watering of clear water from a watering pot with the nose on, all over their heads, in order to wash them, and to take off the smell of the tobacco before being taken into the room. Let this be done on a fine warm day, as taking the plants out of a room in a cold day, and watering them with cold water, checks them very materially. If the water be just luke warm, it will be much better, and the plants will not be checked. Where roses are forced in a hot house, they should be plunged in the tan, and fumigated every month.

There is another insect which infests roses, that cannot be destroyed by fumigating, and are easily discovered; for wherever they are, the leaf of the plant is curled. They should be picked off and crushed to death, or in a few days they will destroy every one of the flower buds.

The aforementioned roses are all increased by layers

and suckers from the old roots. The young shoots should be laid in summer, and cut in the same manner as carnations, or twisted, and laid and forked down about three inches deep. They will be well rooted by the autumn, and may then be taken off and potted or planted in beds. The suckers should be carefully taken off with a spade from the old roots in autumn, and treated in the same manner as the layers.

The China or Monthly Rose is a fine plant for a room, on account of its blooming the greater part of the winter. These should be fresh potted in the autumn in large pots, according to the size of the plants; and the mould should be very rich and light. They must be removed into rooms when the frost comes on. No plant requires more fumigating than this. They thrive remarkably well if planted under a south wall, and nailed up; they grow to a great height, and make a beautiful appearance during the principal part of the summer, and late in autumn.

These plants are propagated by cuttings. Any part of the young branches in spring or summer being taken off at the joint and planted in pots or in the ground, and covered with a glass, readily strike root, and may be potted as soon as they are struck, or planted in a border.

TUBEROSES.—The Double and Single Tuberoses are beautiful sweet scented plants, and may be brought to perfection with very little trouble. They should be planted in April or May. Provide some fine, light, rich compost, and middle sized pots, planting one root in the centre of each pot. Many people divest

them of the offsets, which is a bad practice : for, instead of strengthening the roots, it weakens them. The crown of the root must be only just covered with mould, and if not covered at all, the plant will not be the worse for it.

This beautiful plant always thrives better, and blossoms earlier, if indulged with a hot bed. For those who force cucumbers or melons, and have but few roots, it will be a good plan to plunge the pots to the rims at the back or sides of the bed, to forward them ; but if you have a large quantity of roots, they should have a slight hot bed made for them, and they well deserve it. A bed made for a one-light frame will contain a great quantity of plants ; if it be two feet and a half in height, it will be sufficient. At this season, about six inches of old tan, fine mould, or saw dust, must be placed on the bed, to plunge the pots in, which may be put as close together as possible, or so as to fill the bed. They will require a little water two or three days after being planted, but it must be used very sparingly till the foliage on the top is grown two inches in length, then they must be kept moderately moist. Air should be admitted every day, if the weather be at all favorable, by letting up the light at the back of the frame, or pushing it down a little ; but this light must be kept close every night. When the flower stalks appear, the plants should have more air, by drawing the light half off, or you may take it entirely off in fine weather, while the sun shines on them : if the frame be shallow, the flower stalks will reach the glass before they blow. When this happens to be the case, the frame may be

raised, by placing a brick or stone at each corner of the frame, laying boards or straw round the top of the bed to keep the mould up, and to prevent the air from being drawn in, which would prove injurious. When the plants are in bloom, they may be removed where wanted, either to adorn the warm conspicuous part of the garden, or the apartments of the house, still keeping them well supplied with water, as they will require more when not plunged.

These flowers may be grown equally successful in hot houses, plunged in the bark bed, or kept in front of the house on the flue, but the former method is to be preferred : or they may be blown in perfection in a room or green house, potted exactly the same as for hot beds ; but they will require more water, and, if planted at the same time, will succeed, and be in their beauty when the others are gone. Those grown in beds or hot houses may be removed to any warm sunny apartment of the house when the flower stems are about six inches in length, which will keep them back ; and by these means you will have a succession, which is very desirable. The windows may be opened, without detriment to the plants, in fine weather ; in fact, it is necessary to give them air frequently, as it strengthens the bloom. The pots should always be removed a little distance, from the window, out of the draft, when it is opened, or it will certainly destroy them.

These plants are increased by offsets, which may be taken off after the plants have done flowering, and the green is dried. These must be buried in dry sand in winter, and planted in the natural ground in a warm situation at the beginning of April.

PERSIAN IRIS.—The Persian Iris is a beautiful flower, and will blow on glasses, like the hyacinth, narcissus, &c, but they will blow much stronger in small pots of sand, or sandy loam, putting three plants in each pot. They are managed in a way exactly similar to the hyacinth.

A few pots or glasses of these plants will scent a large apartment. They succeed very well in the natural ground, in a dry situation, and sandy soil.

They are propagated by dividing the offsets from the old roots.

MIGNIONETTE,—should be sown thick in pots, or boxes, at any time of the year, and transplanted when in rough leaf, either into pots filled with light rich mould, (four plants to a pot,) or in boxes, (the plants to be two inches apart) in the same kind of compost. It must be kept in a sunny window, during the winter, and constantly supplied with water, keeping it moderately moist. In the summer it may be kept outside of the window.

THE VERBENA TRIFOLIATA, or **SWEET Vervain**,—is a beautiful plant for rooms, particularly in the summer. However, it loses its leaves generally about December, when many people throw it away, thinking it is dead ; but if it be cut back rather short, and shifted into a larger pot, in good rich mould, as soon as the leaves fall off, it will break again immediately, form a fine green plant, and retain its leaves after till next winter.

This plant will live in the open ground ; but the root should be covered with muck, saw dust, ashes, or any thing most convenient, to keep the frost a little from the root. If the frost kill it to the ground, which it generally does, unless in a very warm situation, it may be cut off close to the ground in April, when it will soon break, and grow very strong. It is very easily raised from the slips or cuttings of the young wood in the summer. Plant them in a large pot ; plunge the pot to the rim in a hot situation, and place a glass over them, making it air proof. Give them water every morning, and they will strike root in about three weeks or a month, when they may be put singly into small pots.

THE FUSHIA COCCINEA,—is a very handsome plant, and blossoms very fine if managed in the following manner :

It requires a large sized pot, and should be potted in strong rich mould. It also requires a good deal of water, and always thrives best if plunged in rather a shady situation during the summer. If kept in a room or a garden, and not plunged, they are not of so good a color ; and unless kept in very large pots, they lose their lower leaves. They generally lose their leaves in the winter, and must then have but very little water. They are propagated by planting the cuttings in the summer, in the same manner as the Verbena, or by seed, which must be sown in April, in pots filled with light mould, and kept constantly moist by which means they will blow in autumn.

THE COBÆA SCANDENS,—is a most beautiful flowering creeper, fit to ornament a flower stand, back of a green house, &c. They do remarkably well to run up a column or tree, or if planted against a wall. They thrive in almost any situation where they have plenty of light and air, even in a northern aspect, where many hardy creepers will not thrive. If wanted to grow in the air, during the summer, (as they are killed by the first hard frost) they may be planted out in April or May where wanted ; give plenty of water, and defend them from frost. About the month of June, if the weather be at all warm, they will grow very rapidly—six inches a day, or more, and will cover an arbor in a very short time. If they are against a tree, they will climb of their own accord, and never require any nailing or tying ; but if grown against a wall, they must be constantly nailed.

They are easily propagated by seed, which they bear plentifully in a green house, or in any sunny situation in the open ground ; or by cuttings, which should be planted in pots of light rich mould any time during the summer, and the pots plunged in the ground in a warm situation ; or in bark beds, placing glasses over them, which should be kept close, and well watered ; by which means they strike root in about six weeks, when they may be placed in small pots, and plunged in the ground, in a warm situation, and will be fit for planting out in a month.

Being a green house plant, it is necessary to raise a fresh supply of young plants every year, either by cuttings raised at the latter end of the summer, or by seed

sown in the spring about March or April. If it be raised in a room, it must be kept warm, and the window never opened against it. It may also be kept in a cucumber bed or hot house, where convenient, and they will flower much sooner.

THE CAMELLIA JAPONICA, or JAPAN ROSE,—is a beautiful well known plant, and may be kept in the room, greenhouse, or hot house. There are many varieties; but the most common ones are the Single and Double Red, Double White, and the Double Striped. They require rather large pots, not liking to be much confined at the root. Fine sandy loam, mixed with a little black, sandy, or boggy mould, and a very small proportion of light rotten dung, or leaf mould, well mixed together and sifted, is a proper compost to pot them in. They should be shifted every year in the beginning of the summer.

This is a hardy green house plant, and, when kept in rooms, should have as much air admitted to them as possible, and have a good washing all over the heads of the plants once a month at least with clear water, by means of a watering pot with the rose on. If the plants are very dusty, it will be necessary to use a piece of sponge, or any soft substance, to wash each leaf singly, holding the leaf in the palm of the hand, with the under side of the leaf downwards; and afterwards give them a washing with the watering pot of water, as nothing disfigures this plant so much as dust.

They are propagated by seed, layers, cuttings, and inarching. The double sorts are generally propagated by inarching them on the single, and sometimes raised by

layers. The single answer best, and make the finest plants when raised from seed imported from China, and sown early in spring in middle sized pots filled with the same kind of compost as before recommended for potting the plants. The pots must be plunged in a dung or bark bed, as the plants will not rise without it.

The *Single Red* may be raised from cuttings, which should be the young shoots of last year's growth, and planted in pots during the spring in the same compost as that used for the seed: they are then to be plunged in a good heat in a hot house, &c. covered with hand or bell glasses, and kept moderately moist by frequent waterings.

When the body or stock of the single sort is about the size of a large goose quill, it is then large enough for inarching.

The method of doing this as follows:* The stocks must be placed so near the tree from which the graft or scions are to be taken, that the young shoots may be easily bent down and joined to the stock. Perhaps it may be necessary to erect a small stage round the plant from which they are to be inarched, which may be done in a green house, hot house, or apartment of the house. Having placed the stocks so as that the grafts may be easily joined to them about the middle, or near the bottom of the stem, then, being provided with a sharp knife and fine tough bass,† make an incision into the stock about two inches lengthwise, and about one third of the thickness of the stock in the middle of the

* The month of April is the best time for performing the work.

† A smooth part of the stock must be chosen, where the graft may be joined to it.

incision, but thinner at the top and bottom : then cut the side of the shoot or graft in the same manner, as smooth as possible, about six or eight inches from the top, so as that the bark of both may join. This done, cut a small slit or tongue in the scion or graft upwards, within half an inch of the top of the incisions, about a quarter of an inch in length, but not more ; then make another tongue in the stock of the same length downwards, so as that the tongue of the graft may fit exactly into it, joining the rind exactly on every side, and tying them together as close as possible with a piece of bass. This part of the stock must then be clayed over with well tempered clay, bringing it an inch above, and an inch below the parts that are joined together, and making it very close, so as to keep out both sun and air. The scion is not to be separated from the tree till firmly united to the stock, and they begin to grow together ; nor is the head of the stock to be cut off till then.

The method of propagating by layers is as follows :— If you have the conveniency of a melon or other pit, where you have a good dung or tan heat, place fine mould on the top of the bed six or eight inches in thickness, turning the plants out of the pots, and planting them in the mould. If it be necessary to lay the plant a little sloping, in order to lay down more of the branches, it will not be the worse. Lay down all the branches you can, giving each a twist ; or cut them in the same manner as directed for carnations. Give them plenty of water till they are struck.

But this is, of the two, the most objectionable method of propagating them ; nor do I recommend it, as they are a long time striking root, and sometimes will not

strike at all. After the layers are rooted, they may be potted in small pots, and the old plant taken up and re-potted.—Messrs. G. Thorburn & Son, New York, have the finest collection of Camellias in the United States, comprising Double and Single Red, White fragrant, Pink, Scarlet, Black, Tea Leaved, Striped, &c. &c.

MYRTLES.—The *Myrtus Communis* is the species most commonly cultivated, for adorning rooms, green houses, &c. There are many varieties of this species, and all very hardy green house plants, viz. 1. The Broad leaved Dutch ; 2. Venus ; 3. Roman ; 4. Box-leaved ; 5. Italian ; 6. Nutmeg ; 7. Orange leaved ; 8. Gold striped ; 9. Silver striped, two varieties ; 10. Thyme or Rosemary leaved ; 11. Double Flowering.

The first, third, fifth, sixth, and eleventh sorts are all very hardy, and thrive well growing against a south, or any warm sunny wall, and only require to be matted in hard frost : if they are not sheltered at all, the frost very seldom destroys them. They are indeed often killed almost to the ground, but generally break and grow again very strong during the summer.

Those intended for rooms or green houses should be in moderate sized pots, not too much confined at the root, and potted in rather strong rich mould. They should be well supplied with water, and washed over the heads with clean water, by means of a watering pot and rose, once a month. To keep them dwarf and bushy, the tops of the young leading shoot should be pinched off as they advance in growth. They are propagated by cuttings of the young shoots in summer, stripping the lower leaves off, planting and treating them the same as the Verbena.

ON GREEN HOUSE PLANTS, &c, KEPT IN ROOMS.

HAVING already given directions for the management of a few different sorts of green house plants separately, which are commonly grown in rooms, I now come to treat of the management of them in general.

All green house plants, &c. kept in rooms, must be constantly supplied with water, which should be always applied on the tops of the pots, and from no consideration whatever should any be suffered to remain in the water pans under the pots, (the consequence of which has been before spoken of) particularly in the winter season, when they must also be kept clean from dead leaves, &c. When the plants begin to draw, which will be discovered by their weak and sickly appearance, and the branches growing long and weak, the tops of the shoots should be just nipped off with the finger and thumb, or a pair of scissors, which will cause them to grow bushy and handsome; and be sure not to forget to fumigate them when there is any appearance of insects. The method of doing this has been before described.

With respect to air, the plants should have a good share in fine warm weather. Many people open the under sash windows where the plants stand, which is a very bad practice, as they are then exposed to the draft, which injures them more than if they were entirely exposed to the open air. If the top sash be drawn up, or a window opened, where there is no plants, in fine weather it will prove beneficial to them. If the under sash be opened where the plants stand, they should be removed out of the draft to some other part of the room.

All green house plants should be shifted every year, about the month of May, into larger pots, in light rich sandy compost, such as is recommended for hyacinths, as most of them thrive well in it.

The different sorts of geraniums are generally raised by cuttings, which strike very free, and are planted and treated the same as the Heliotrope; or many of the sorts may be raised by seed sown in March, in pots of fine light mould. By these means new varieties are often obtained.







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